MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2016/2017

TBI 3131 – BUSINESS INTELLIGENCE

(All sections / Groups)

17 OCTOBER 2016
2.30 p.m. - 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages excluding cover page with 5 Questions only.

2. Attempt **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please print all your answers in the Answer Booklet provided.

QUESTION 1

a. List and describe the major components of ***"Business Inteligence" (BI).*** (2 marks)

b. Describe the major types of BI users. (2 marks)

c. **Figure 1** is a model to embrace pressures, opportunities, integrated computerised digital support and business intelligence. Label **a, b, c** as main business components and ***d, e, f, g, h, i, j, k*** and ***l*** as examples for each component in the model. (3 marks)

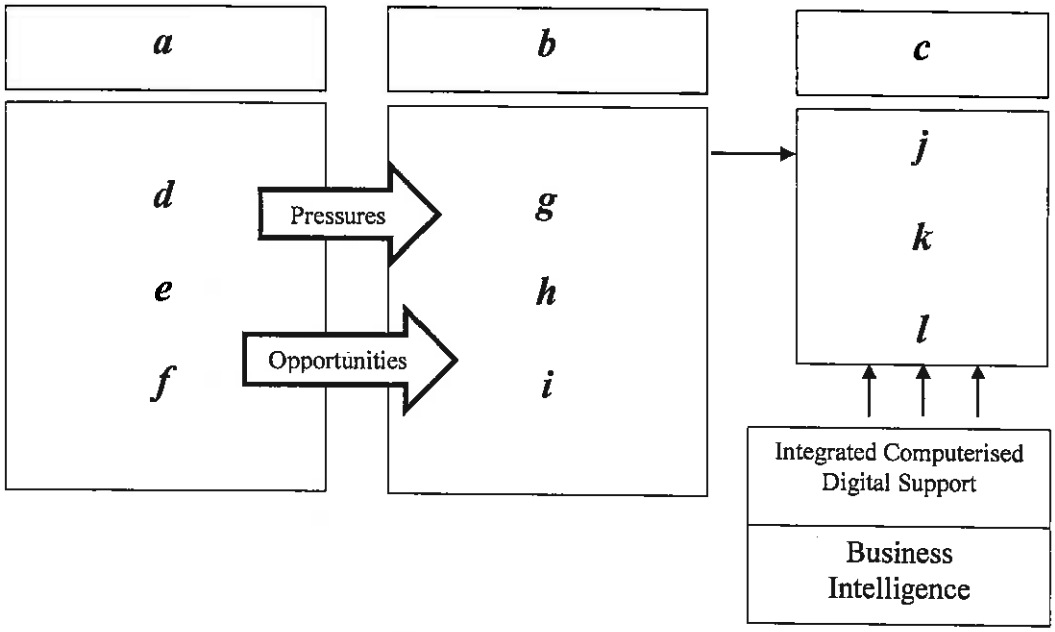

Figure 1: *a-b-c* Model

d. Outline a simple taxonomy of "***Analytics***". (1 mark)

e. List any **TWO (2)** enablers for developing well-defined business problems and opportunities. (1 mark)

f. List any **TWO (2)** enablers for developing accurate projections of the future states and conditions. (1 mark)

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QUESTION 2

a. Distinguish between OLAP (Online Analytical Processing) and OLTP (Online Transaction Processing). (1 mark)

b. Briefly explain the concept of ***"cube"*** in OLAP. (1 mark)

c. Interpret ***"drill down", "roll up", "slice"*** and ***"dice"*** using OLAP. (3 marks)

d. Explain scalability using ***"Data Warehousing" (DW).*** (2 marks)

e. Explain a good business report. Defend your answers with **FOUR (4)** primary characteristics of a good business report. (3 marks)

QUESTION 3

a. Explain any **SIX (6)** major data mining methods. (3 marks)

b. Summarise **TWO (2)** fundamental differences of your chosen data mining methods in Question 3a. (2 marks)

c. Interpret examples of situations in which classification would be an appropriate data mining technique. (1 mark)

d. Interpret examples of situations in which regression would be an appropriate data mining technique. (1 mark)

e. Many common data mining mistakes/blunders are preventable. Explain any **SIX (6)** practices to minimise and/or eliminate these common mistakes/blunders. (3 marks)

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QUESTION 4

Every day, a substantial amount of new customer feedback data – rich in sentiment, customer issues, and product insights – becomes available to organisations through emails. Repair notes, CRM notes, and online in social media. Within that data exists a wealth of insight into how customers feel about products, services, brands, and much more. That data also holds information about potential issues that could easily impact a product's long-term success and a company's bottom line. This data is invaluable to marketing, product, and service managers across every industry.

Attensity, a premier text analytics solution provider, combines the company's rich text analytics applications within customer specific BI platforms. The result is an intuitive solution that enables customers to fully leverage critical data assets to discover invaluable business insight and to foster better and faster decision making.

Whirlpool is the world's leading manufacturer and marketer of major home appliances, with annual sales of approximately $19 billion, 67,000 employees, and nearly 70 manufacturing and technology research centres around the world. Whirlpool recognises that consumers lead busy, active lives and continues to create solutions that help consumers optimise productivity and efficiency in the home. In addition to designing appliance solutions based on consumer insight, Whirlpool's brand is dedicated to creating ENERGY STAR-qualified appliances like the Resource Saver side-by-side refrigerator, which recently was rated the #1 brand for side-by-side refrigerators.

Customer satisfaction and feedback are at the centre of how Whirlpool drives its overarching business strategy. As such, gaining insight into customer satisfaction and product feedback is paramount. One of the Whirlpool's goals is to more effectively understand and react to customer and product feedback data originating from blogs, e-mails, reviews, forums, repair notes, and other data sources. Whirlpool also strives to enable its managers to report on longitudinal data and be able to compare issues by brand over time. Whirlpool has entrusted Attensity's text analytics solutions, and with that, Whirlpool listens and acts on customer data in their service department, their innovation and product developments groups, and in market every day.

Source: Attensity, Customer Success Story, attensity.com/2010/08/21/ whirlpool-2/

a. Construct a set of text mining steps from "a substantial amount of new customer feedback data" to produce a text analysis report for Whirlpool. (4 marks)

b. Demonstrate how did Whirlpool use capabilities of text analytics to better understand their customers and improve product offerings? (4 marks)

c. Discover any **TWO (2)** challenges for Whirlpool. (2 marks)

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QUESTION 5

a. Demonstrate how can geocoded locations assist in better decision making for a company? (3 marks)

b. Demonstrate an emerging business model by applying ***"Web 2.0"***. (2 marks)

c. With an example, demonstrate how analytics-based applications can be used not just for fun but also to enhance productivity? (5 marks)

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